

No. 666,152.

Patented Jan. 15, 1901.

F. H. PARADICE.
WATER CLOSET.

(Application filed Oct. 26, 1899.)

(No Model.)

3 Sheets—Sheet 2.

FIG. 2.

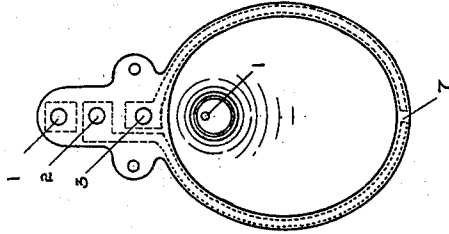
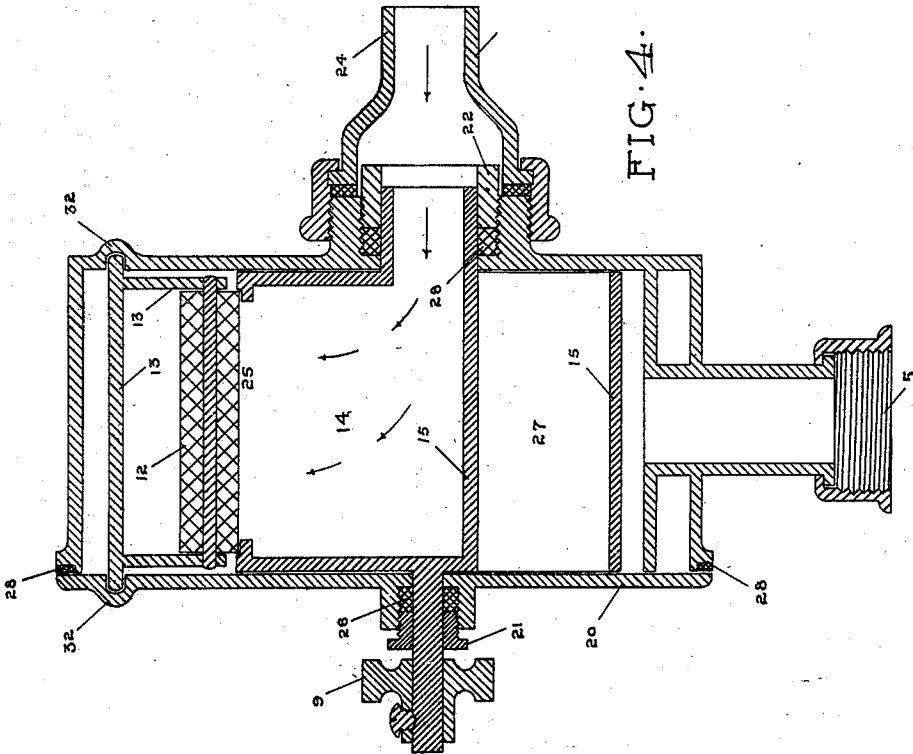


FIG. 4.



: WITNESSES :

Frank N. Paradise Jr.
Frank M. Havens.

: INVENTOR :

Frank H. Paradise

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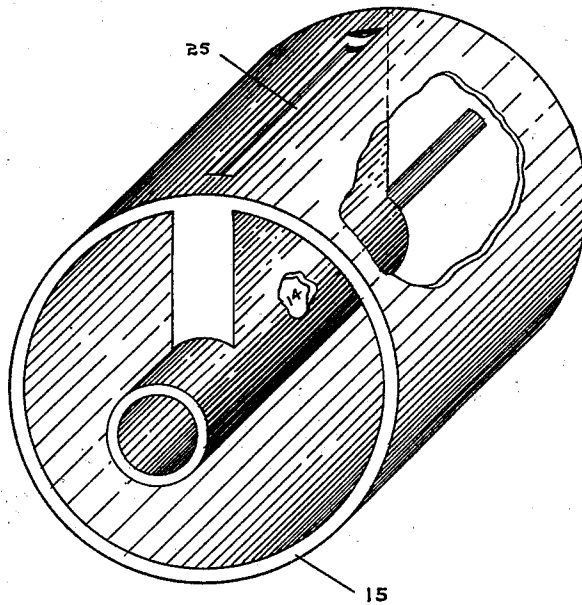
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3 Sheets—Sheet 3.

FIG. 5.



: WITNESSES :

Frank H. Paradise Jr.
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: INVENTOR :

Paul H. Paradise

UNITED STATES PATENT OFFICE.

FRANK H. PARADICE, OF DENVER, COLORADO.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 666,152, dated January 15, 1901.

Application filed October 26, 1899. Serial No. 734,899. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. PARADICE, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented new and useful Improvements in Water-Closets, of which the following is a specification.

My invention relates to improvements in water-closets of the class that are flushed by means of slow-closing valves, and pertains not only to the valve, but also to the form of the water-closet.

Closets have been made with valves for flushing them; but with the supply available in houses supplied from city waterworks, where most all such closets are used, sufficient quantity and force cannot generally be obtained direct from the service-pipe to properly flush all parts of the closet-bowl and eject the contents therefrom at the same time. To overcome this difficulty, closets are provided with tanks to accumulate sufficient water to furnish a thorough flush through a pipe larger than the service-pipe; but tanks and the necessary pipes and connections for them are costly and otherwise objectionable. Slow-closing valves have been devised to overcome these objections; but they require larger supply-pipes than are generally in use or allowable by water companies, or they require large house-supply tanks in upper parts of buildings, with large connecting-pipes or other expensive adjuncts, to insure a sufficient flush. My invention overcomes these objections by using the available supply to alternately flush the different parts of the water-closet instead of dividing the water to flush at one time all parts of the water-closet as they have been made heretofore.

Having reference to the annexed drawings, Figure 1 is a general sectional view of water-closet with valve attached. Fig. 2 is a top view of closet. Fig. 3 is a sectional view of valve. Fig. 4 is a transverse sectional view of valve. Fig. 5 is a perspective view of the inside movable part of valve, Fig. 3.

Like figures indicate like parts in the several views.

The handle 19 operates the valve when raised, permitting the water which has filled the chamber 14 through connection 24 to flow successively into the passages 16, 17, and 18

as movable part of valve 15 revolves, thence through the connections 4 5 6 into the closet. The handle 19 is stopped in its upward movement when the movable part of valve 15, (shown in perspective, Fig. 5,) which is operated by rack 8 and pinion 9, reaches 10, which is an integral part of the shell of valve, Fig. 3. When handle 19 is released, its weight causes the movable part 15 to return to its normal position, coming in contact with the rubber roller 12, which closes the opening 25, thus shutting off flow of water to closet. It is intended that the effective flow of water shall take place when the handle is slowly returning to its normal position, as shown at 19 in Figs. 1 and 3. The time occupied by the valve in closing is governed by the weight of handle 19, which in revolving the movable part 15 must expel the water between the parts 10 and 26. The water mentioned here gets into the chamber 27 by passing between the movable part 15 and the stationary parts of valve, Fig. 3, as it is not requisite to have these working parts ground perfectly watertight; but they are sufficiently tight to prevent any appreciable part of water from flowing into other than the passage intended.

Check-valve 11, with the holes 23 23, is for the purpose of permitting the water in chamber 27 to flow to the other side of 10 when handle 19 is being raised.

In operation after handle 19 is raised full the water would flow into passage 17, thence to the jet 1 in Fig. 1, continuing until valve-mouth 25 reaches 29, then into passage 18, thence into chamber 2, which leads to left-hand side of flush-rim. (Shown in plan, Fig. 2.) Valve-mouth 25 continues on to passage 16, and water flows to right-hand side of flush-rim, as shown, through chamber 3, until valve-mouth 25 reaches 31 and the valve-closer 12. The manner in which 12 engages 25 is shown by the dotted lines. This valve-closer 12 in its frame 13 hangs free from its pin-heads in the sockets 32 32, dropping into valve-mouth 25, which is cut on its outside edges to receive valve-closer 12, the rubber of which yields sufficiently to permit movable part 15 and valve-closer 12 to assume its normal position, as shown in Fig. 3, in which position it would stop the flow of water under heavy pressure.

In further explanation of figures or drawings, 7 indicates where flushing-rim is stopped, so as to have full flow of water on one-half of flushing-rim at one time.

- 5 20 is a removable cap or plate.
 21 is a stuffing-nut.
 22 is a stuffing-nut.
 28 28 28 represent gasket and packing material.

- 10 The foregoing description is of a siphon-jet water-closet operated by a slow-closing three-way valve, being the combination I consider preferable. However, the valve may be made with any reasonable number of dis-
- 15 charges. Hopper closets, washout and wash-down closets, and all other water-closets can be better flushed when connected direct with the service-pipe by having their flushing-passages entirely separated, so that the whole
- 20 supply may be applied as a flush successively distributing to different parts of closet, substantially as I have shown on drawings and described herein.

- 25 Having explained the merits of my invention, what I claim, and for which I desire Letters Patent, is as follows:

1. The combination in a siphon-jet water-closet of a rotary, slow-closing, successively-distributing valve, having an inlet, 24, and outlet-passages, 16 17 and 18, a rotary distributing-cylinder, 15, with its successively-distributing waterway 25, the swinging valve-closer, 12 the water-flow-obstructing partition 10 with its valve 11 all substantially as set forth.

2. The combination in a siphon-jet water-closet of a rotary, slow-closing successively-distributing valve and a water-closet bowl having separate non-communicating flushing-passages 1 leading to the jet, 2 leading to one side of flushing-rim, and 3 leading to the other side of flushing-rim, the flushing-rim stoppage 7, the three flush connections, 4 5 6 all substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK H. PARADICE.

Witnesses:

FRANK. M. HAVENS,
 FRED. J. PARADICE.